

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

**Claims 1-2. (canceled).**

**3. (previously presented):** A biochemical analysis unit comprising a substrate made of a material which attenuates radiation energy and/or light energy and formed with a plurality of holes, and a plurality of absorptive regions formed by charging an absorptive material in the plurality of holes formed in the substrate, the plurality of absorptive regions being selectively labeled with at least one kind of labeling substance selected from a group consisting of a radioactive labeling substance, a labeling substance which generates chemiluminescent emission when it contacts a chemiluminescent substrate and a fluorescent substance by spotting specific binding substances whose sequence or composition are known therein and specifically binding a substance derived from a living organism and labeled with at least one kind of said labeling substance with the specific binding substances

wherein the absorptive region is formed of a material selected from the group consisting of a fiber material and a porous material, including a carbon material or a material adapted for forming a membrane filter and

wherein the substance derived from a living organism is specifically bound with specific binding substances by a reaction selected from a group consisting of hybridization antigen-antibody reaction and receptor-ligand reaction.

**Claims 4-65. (canceled).**

**66. (previously presented):** A biochemical analyzing method comprising the steps of preparing a biochemical analysis unit by spotting specific binding substances, which specifically binds with a substance derived from a living organism and whose sequence or composition are known, in a plurality of absorptive regions, each of which is formed in a plurality of holes formed in a substrate made of a material which attenuates radiation energy and specifically binding a substance derived from a living organism and labeled with a radioactive labeling substance with the specific binding substances, superposing the biochemical analysis unit on a stimuable phosphor sheet in which a stimuable phosphor layer is formed so that the stimuable phosphor layer faces the plurality of absorptive regions, thereby exposing the stimuable phosphor layer to the radioactive labeling substance contained in the plurality of absorptive regions, irradiating the stimuable phosphor layer exposed to the radioactive labeling substance with a stimulating ray, thereby exciting stimuable phosphor contained in the stimuable phosphor layer, photoelectrically detecting stimulated emission released from the stimuable phosphor contained in the stimuable phosphor layer, thereby producing biochemical analysis data, and effecting biochemical analysis based on the biochemical analysis data.

**67. (original):** A biochemical analyzing method in accordance with Claim 66 wherein a plurality of dot-like stimuable phosphor layer regions are formed spaced-apart from each other in the stimuable phosphor sheet in the same pattern as that of the plurality of holes formed in the substrate of the biochemical analysis unit and the biochemical analysis unit and the stimuable phosphor sheet are superposed on each other so that each of the plurality of dot-like stimuable phosphor layer regions faces one of the plurality of absorptive regions in the plurality of holes formed in the substrate of the biochemical analysis unit, thereby exposing the plurality of dot-like stimuable phosphor layer regions of the stimuable phosphor sheet to the radioactive labeling substance contained in the plurality of absorptive regions.

**68. (previously presented):** A biochemical analyzing method comprising the steps of preparing a biochemical analysis unit comprising an absorptive substrate formed of an absorptive material and a perforated plate made of a material which attenuates radiation energy and light energy and formed with a plurality of through-holes, the perforated plate being closely contacted with at least one surface of the absorptive substrate to form a plurality of absorptive regions of the absorptive substrate in the plurality of through-holes formed in the perforated plate, the plurality of absorptive regions being selectively labeled with a radioactive labeling substance by spotting specific binding substances, which specifically binds with a substance derived from a living organism and whose sequence, or composition are known, in the plurality of absorptive regions and specifically binding a substance derived from a living organism and labeled with a radioactive labeling substance, superposing the biochemical analysis unit and a stimuable phosphor sheet in which a stimuable phosphor layer is formed via the perforated plate so that the

stimulable phosphor layer faces the plurality of absorptive regions, thereby exposing the stimulable phosphor layer to the radioactive labeling substance contained in the plurality of absorptive regions, irradiating the stimulable phosphor layer exposed to the radioactive labeling substance with a stimulating ray to excite stimulable phosphor contained in the stimulable phosphor layer, photoelectrically detecting stimulated emission released from the stimulable phosphor contained in the stimulable phosphor layer to produce biochemical analysis data, and effecting biochemical analysis based on the biochemical analysis data.

**69. (original):** A biochemical analyzing method in accordance with Claim 68 wherein a plurality of dot-like stimulable phosphor layer regions are formed spaced-apart in the stimulable phosphor sheet in the same pattern as that of the plurality of through-holes formed in the perforated plate, and the biochemical analysis unit and the stimulable phosphor sheet are superposed on each other so that each of the plurality of dot-like stimulable phosphor layer regions faces one of the plurality of absorptive regions via one of the through-holes formed in the perforated plate, thereby exposing the plurality of dot-like stimulable phosphor layer regions to a radioactive labeling substance contained in the plurality of absorptive regions.

**70. (previously presented):** A biochemical analyzing method comprising the steps of preparing a biochemical analysis unit by spotting specific binding substances, which specifically binds with a substance derived from a living organism and whose sequence, or composition are known, in a plurality of absorptive regions formed in a plurality of holes formed in a substrate made of a material which attenuates light energy and specifically binding a substance derived

from a living organism and labeled with a fluorescent substance with the specific binding substances, thereby selectively labeling a plurality of absorptive regions, irradiating the biochemical analysis unit with a stimulating ray, thereby exciting the fluorescent substance, photoelectrically detecting fluorescence released from the fluorescent substance, thereby producing biochemical analysis data, and effecting biochemical analysis based on the biochemical analysis data.

**71. (previously presented):** A biochemical analyzing method comprising the steps of preparing a biochemical analysis unit by spotting specific binding substances, which specifically binds with a substance derived from a living organism and whose sequence, or composition are known, in a plurality of absorptive regions formed in a plurality of holes formed in a substrate made of a material which attenuates light energy and specifically binding a substance derived from a living organism and labeled with a labeling substance which generates a chemiluminescent emission when it contacts a chemiluminescent substrate with the specific binding substances, thereby selectively labeling the plurality of absorptive regions, bringing the biochemical analysis unit into close contact with a chemiluminescent substrate, photoelectrically detecting chemiluminescent emission released from the labeling substance, thereby producing biochemical analysis data, and effecting biochemical analysis based on the biochemical analysis data.

**72. (previously presented):** A biochemical analyzing method comprising the steps of preparing a biochemical analysis unit by spotting specific binding substances, which specifically

binds with a substance derived from a living organism and whose sequence or and composition are known, in a plurality of absorptive regions formed in a plurality of holes formed in a substrate made of a material which attenuates light energy and specifically binding a substance derived from a living organism and labeled with a fluorescent substance and a labeling substance which generates chemiluminescent emission when it contacts a chemiluminescent substrate with the specific binding substances, thereby selectively labeling the plurality of absorptive regions, irradiating the biochemical analysis unit with a stimulating ray to excite the fluorescent substance, and photoelectrically detecting fluorescence released from the fluorescent substance, thereby producing biochemical analysis data, while bringing the biochemical analysis unit into close contact with a chemiluminescent substrate, photoelectrically detecting chemiluminescent emission released from the labeling substance, thereby producing biochemical analysis data, and effecting biochemical analysis based on the biochemical analysis data.

**Claims 73-78. (canceled).**

**79. (previously presented):** A biochemical analysis unit in accordance with Claim 3 wherein each of the plurality of holes is formed as a through-hole.

**Claims 80-81. (canceled).**

**82. (previously presented):** A biochemical analysis unit in accordance with Claim 3 wherein each of the plurality of holes is formed as a recess.

**Claims 83-84. (canceled).**

**85. (previously presented):** A biochemical analysis unit in accordance with Claim 3 wherein the substrate is formed of a flexible material.

**Claims 86-87. (canceled).**

**88. (previously presented):** A biochemical analysis unit in accordance with Claim 3 wherein the substrate is formed with a gripping portion by which the substrate can be gripped.

**Claims 89-91. (canceled).**

**92. (previously presented):** A biochemical analysis unit in accordance with Claim 89 wherein perforated plates are in contact with the both surfaces of the absorptive substrate.

**Claims 93-94. (canceled).**

**95. (previously presented):** A biochemical analysis unit in accordance with Claim 3 which is formed with 10 or more holes.

**Claims 96-97. (canceled).**

**98. (previously presented):** A biochemical analysis unit in accordance with Claim 89 which is formed with 10 or more holes.

**Claims 99-100. (canceled).**

**101. (previously presented):** A biochemical analysis unit in accordance with Claim 95 which is formed with 1,000 or more holes.

**Claims 102-103. (canceled).**

**104. (previously presented):** A biochemical analysis unit in accordance with Claim 98 which is formed with 1,000 or more holes.

**Claims 105-106. (canceled).**

**107. (previously presented):** A biochemical analysis unit in accordance with Claim 101 which is formed with 10,000 or more holes.

**Claims 108-109. (canceled).**



**110. (previously presented):** A biochemical analysis unit in accordance with Claim 104 which is formed with 10,000 or more holes.

**Claims 111-112. (canceled).**

**113. (previously presented):** A biochemical analysis unit in accordance with Claim 3 wherein each of the plurality of holes has a size of less than  $5 \text{ mm}^2$ .

**Claims 114-115. (canceled).**

**116. (previously presented):** A biochemical analysis unit in accordance with Claim 89 wherein each of the plurality of holes has a size of less than  $5 \text{ mm}^2$ .

**Claims 117-118. (canceled).**

**119. (previously presented):** A biochemical analysis unit in accordance with Claim 113 wherein each of the plurality of holes has a size of less than  $1 \text{ mm}^2$ .

**Claims 120-121. (canceled).**

**122. (previously presented):** A biochemical analysis unit in accordance with Claim 89 wherein each of the plurality of holes has a size of less than  $1 \text{ mm}^2$ .

**Claims 123-124. (canceled).**

**125. (previously presented):** A biochemical analysis unit in accordance with Claim 119 wherein each of the plurality of holes has a size of less than  $0.1 \text{ mm}^2$ .

**Claims 126-127. (canceled).**

**128. (previously presented):** A biochemical analysis unit in accordance with Claim 122 wherein each of the plurality of holes has a size of less than  $0.1 \text{ mm}^2$ .

**Claims 129-130. (canceled).**

**131. (previously presented):** A biochemical analysis unit in accordance with Claim 3 wherein the plurality of holes are formed at a density of 10 or more per  $\text{cm}^2$ .

**Claims 132-133. (canceled).**

**134. (previously presented):** A biochemical analysis unit in accordance with Claim 89 wherein the plurality of holes are formed at a density of 10 or more per  $\text{cm}^2$ .

**Claims 135-136. (canceled).**

**137. (previously presented):** A biochemical analysis unit in accordance with Claim 131 wherein the plurality of holes are formed at a density of 1,000 or more per  $\text{cm}^2$ .

**Claims 138-139. (canceled).**

**140. (previously presented):** A biochemical analysis unit in accordance with Claim 134 wherein the plurality of holes are formed at a density of 1,000 or more per  $\text{cm}^2$ .

**141. (previously presented):** A biochemical analysis unit comprising a substrate made of a material which attenuates radiation energy and/or light energy and formed with a plurality of holes, and a plurality of absorptive regions formed by charging an absorptive material in the plurality of holes formed in the substrate

wherein the absorptive region is formed of a material selected from the group consisting of a fiber material and a porous material, including an activated carbon material or a material adapted for forming a membrane filter,

wherein the plurality of holes are formed at a density of 10,000 or more per  $\text{cm}^2$ .

**142. (previously presented):** A biochemical analysis unit comprising a substrate made of a material which attenuates radiation energy and/or light energy and formed with a plurality of holes, and a plurality of absorptive regions formed by charging an absorptive material in the plurality of holes formed in the substrate, the plurality of absorptive regions being selectively

labeled with at least one kind of labeling substance selected from a group consisting of a radioactive labeling substance, a labeling substance which generates chemiluminescent emission when it contacts a chemiluminescent substrate and a fluorescent substance by spotting specific binding substances whose sequence or composition are known therein and specifically binding a substance derived from a living organism and labeled with at least one kind of said labeling substance with the specific binding substances

wherein the absorptive region is formed of a material selected from the group consisting of a fiber material and a porous material, including an activated carbon material or a material adapted for forming a membrane filter,

wherein the plurality of holes are formed at a density of 10,000 or more per  $\text{cm}^2$ .

**143. (previously presented):** A biochemical analysis unit in accordance with Claim 137 wherein the plurality of holes are formed at a density of 10,000 or more per  $\text{cm}^2$ .

**144-145. (canceled).**

**146. (previously presented):** A biochemical analysis unit in accordance with Claim 140 wherein the plurality of holes are formed at a density of 10,000 or more per  $\text{cm}^2$ .

**Claims 147-148. (canceled).**

**149. (previously presented):** A biochemical analysis unit in accordance with Claim 3 wherein the material which attenuates radiation energy and/or light energy has a property of reducing the energy of radiation and/or light to  $1/5$  or less when the radiation and/or light travels in the material by a distance equal to that between neighboring absorptive regions.

**Claims 150-151. (canceled).**

**152. (previously presented):** A biochemical analysis unit in accordance with Claim 89 wherein the material which attenuates radiation energy and/or light energy has a property of reducing the energy of radiation and/or light to  $1/5$  or less when the radiation and/or light travels in the material by a distance equal to that between neighboring absorptive regions.

**Claims 153-154. (canceled).**

**155. (previously presented):** A biochemical analysis unit in accordance with Claim 149 wherein the material which attenuates radiation energy and/or light energy has a property of reducing the energy of radiation and/or light to  $1/10$  or less when the radiation and/or light travels in the material by a distance equal to that between neighboring absorptive regions.

**Claims 156-157. (canceled).**

**158. (previously presented):** A biochemical analysis unit in accordance with Claim 152 wherein the material which attenuates radiation energy and/or light energy has a property of reducing the energy of radiation and/or light to 1/10 or less when the radiation and/or light travels in the material by a distance equal to that between neighboring absorptive regions.

**Claims 159-160. (canceled).**

**161. (previously presented):** A biochemical analysis unit in accordance with Claim 155 wherein the material which attenuates radiation energy and/or light energy has a property of reducing the energy of radiation and/or light to 1/100 or less when the radiation and/or light travels in the material by a distance equal to that between neighboring absorptive regions.

**Claims 162-163. (canceled).**

**164. (previously presented):** A biochemical analysis unit in accordance with Claim 158 wherein the material which attenuates radiation energy and/or light energy has a property of reducing the energy of radiation and/or light to 1/100 or less when the radiation and/or light travels in the material by a distance equal to that between neighboring absorptive regions.

**Claims 165-166. (canceled).**

**167. (previously presented):** A biochemical analysis unit in accordance with Claim 149 wherein the substrate is formed of a material selected from a group consisting of metal material, ceramic material and plastic material.

**Claims 168-169. (canceled).**

**170. (previously presented):** A biochemical analysis unit in accordance with Claim 152 wherein the substrate is formed of a material selected from a group consisting of metal material, ceramic material and plastic material.

**171. (previously presented):** A biochemical analysis unit comprising a substrate made of a material which attenuates radiation energy and/or light energy and formed with a plurality of holes, and a plurality of absorptive regions formed by charging an absorptive material in the plurality of holes formed in the substrate

wherein the absorptive region is formed of a material selected from the group consisting of a fiber material and porous material, including a carbon material or a material adapted for forming a membrane filter and

wherein the plurality of holes are formed at a density of 10,000 or more per cm<sup>2</sup>.

**172. (previously presented):** A biochemical analysis unit comprising a substrate made of a material which attenuates radiation energy and/or light energy and formed with a plurality of holes, and a plurality of absorptive regions formed by charging an absorptive material in the

plurality of holes formed in the substrate, the plurality of absorptive regions being selectively labeled with at least one kind of labeling substance selected from a group consisting of a radioactive labeling substance, a labeling substance which generates chemiluminescent emission when it contacts a chemiluminescent substrate and a fluorescent substance by spotting specific binding substances whose sequence or composition are known therein and specifically binding a substance derived from a living organism and labeled with at least one kind of said labeling substance with the specific binding substances

wherein the absorptive region is formed of a material selected from the group consisting of a fiber material and a porous material, including a carbon material or a material adapted for forming a membrane filter and

wherein the plurality of holes are formed at a density of 10,000 or more per  $\text{cm}^2$ .

**173. (previously presented):** A biochemical analysis unit comprising an absorptive substrate formed of an absorptive material and a perforated plate formed with a plurality of through-holes and made of a material which attenuates radiation energy and light energy, the perforated plate being closely contacted with at least one surface of the absorptive substrate to form a plurality of absorptive regions of the absorptive substrate in the plurality of through-holes formed in the perforated plate

wherein the absorptive region is formed of a material selected from the group consisting of a fiber material and a porous material, including a carbon material or a material adapted for forming a membrane filter and

wherein the plurality of holes are formed at a density of 10,000 or more per  $\text{cm}^2$ .



**174. (currently amended):** A biochemical analysis unit comprising a substrate made of a material which attenuates radiation energy and/or light energy and formed with a plurality of holes, and a plurality of absorptive regions formed by charging an absorptive material in the plurality of holes formed in the substrate

wherein the absorptive region is formed of a ~~material selected from the group consisting of a fiber material and porous material~~, including a carbon material or a material adapted for forming a membrane filter ~~and~~

~~wherein the absorptive region is formed on a fiber material.~~

**175. (currently amended):** A biochemical analysis unit comprising a substrate made of a material which attenuates radiation energy and/or light energy and formed with a plurality of holes, and a plurality of absorptive regions formed by charging an absorptive material in the plurality of holes formed in the substrate, the plurality of absorptive regions being selectively labeled with at least one kind of labeling substance selected from a group consisting of a radioactive labeling substance, a labeling substance which generates chemiluminescent emission when it contacts a chemiluminescent substrate and a fluorescent substance by spotting specific binding substances whose sequence or composition are known therein and specifically binding a substance derived from a living organism and labeled with at least one kind of said labeling substance with the specific binding substances

wherein the absorptive region is formed of a ~~material selected from the group consisting of a fiber material and a porous material~~, including a carbon material or a material adapted for forming a membrane filter ~~and~~

~~wherein the absorptive region is formed on a fiber material.~~

**Claim 176. (canceled).**

**177. (previously presented):** A biochemical analysis unit in accordance with Claim 3 wherein the fiber material is selected from the group consisting of nylons and cellulose derivatives.

**178. (previously presented):** A biochemical analysis unit in accordance with Claim 89 wherein the fiber material is selected from the group consisting of nylons and cellulose derivatives.

**179. (previously presented):** A biochemical analysis unit in accordance with Claim 171 wherein the fiber material is selected from the group consisting of nylons and cellulose derivatives.

**180. (previously presented):** A biochemical analysis unit in accordance with Claim 172 wherein the fiber material is selected from the group consisting of nylons and cellulose derivatives.

**181. (previously presented):** A biochemical analysis unit in accordance with Claim 173 wherein the fiber material is selected from the group consisting of nylons and cellulose derivatives.

**182. (previously presented):** A biochemical analysis unit in accordance with Claim 174 wherein the fiber material is selected from the group consisting of nylons and cellulose derivatives.

**183. (previously presented):** A biochemical analysis unit in accordance with Claim 175 wherein the fiber material is selected from the group consisting of nylons and cellulose derivatives.

**184. (canceled).**